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Claim Amendment under 37 CFR 1.121(c)

Claim 1. (Currently amended) A zoom system for forming
an image with varying magnification comprising one
5 or more variable focal length lenses,
wherein the variable focal length lens is made of a
micromirror array lens, wherein the micromirror
array lens comprises a plurality of micromirrors,
wherein each micromirror is controlled to change the
10 focal length of the micromirror array lens, wherein
the micromirror array lens further comprises a
plurality of mechanical structures upholding the
micromirrors and actuating components actuating the
micromirrors.

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Claims 2. - 3. (Cancelled)

Claim 4. (Currently amended) The zoom system of
claim [[2]] 1, wherein the translation of each
20 micromirror of the micromirror array lens is
controlled.

Claim 5. (Currently amended) The zoom system of
claim [[2]] 1, wherein the rotation of each
25 micromirror of the micromirror array lens is

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controlled.

Claim 6. (Currently amended) The zoom system of
claim [[2]] 1, wherein the translation and rotation
5 of each micromirror of the micromirror array lens
are controlled.

Claim 7. (Currently amended) The zoom system of
claim [[2]] 1, wherein the micromirrors of the
10 micromirror array lens are arranged to form one or
more concentric circles.

Claim 8. (Currently amended) The zoom system of
claim [[2]] 1, wherein each micromirror of the
15 micromirror array lens has a fan shape.

Claim 9. (Currently amended) The zoom system of
claim [[2]] 1, wherein the reflective surface of
each micromirror of the micromirror array lens is
20 substantially flat..

Claim 10. (Currently amended) The zoom system of
claim [[2]] 1, wherein the reflective surface of
each micromirror of the micromirror array lens has a
25 curvature.

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Claim 11. (Original) The zoom system of claim 10,
wherein the curvature is controlled.

5 Claim 12. (Currently amended) The zoom system of
claim [[2]] 1, wherein each micromirror of the
micromirror array lens is actuated by electrostatic
force.

10 Claim 13. (Currently amended) The zoom system of
claim [[2]] 1, wherein each micromirror of the
micromirror array lens is actuated by
electromagnetic force

15 Claim 14. (Currently amended) The zoom system of
claim [[2]] 1, wherein each micromirror of the
micromirror array lens is actuated by electrostatic
force and electromagnetic force.

20 Claim 15. (Currently amended) The zoom system of
claim [[2]] 1, ~~wherein the micromirror array lens
further comprises a plurality of mechanical
structures upholding the micromirrors and actuating
components actuating the micromirrors,~~ wherein the
25 mechanical structure and the actuating components

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are located under the micromirrors.

5 Claim 16. (Currently amended) The zoom system of
claim [[2]] 1, wherein the micromirror array lens is
a reflective Fresnel lens.

10 Claim 17. (Currently amended) The zoom system of
claim [[2]] 1, wherein the micromirrors are arranged
in a flat plane.

15 Claim 18. (Currently amended) The zoom system of
claim [[2]] 1, and wherein each micromirror is
controlled to change the focal length of the
micromirror array lens.

20 Claim 19. (Currently amended) The zoom system of
claim [[2]] 1, wherein the micromirror array lens is
an adaptive optical component, wherein the
micromirror array lens compensates for phase errors
of light introduced by the medium between an object
and its image.

Claim 20. (Currently amended) The zoom system of
claim [[2]] 1, wherein the micromirror array lens is

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an adaptive optical component, wherein the
micromirror array lens corrects aberrations.

Claim 21. (Currently amended) The zoom system of
5 claim [[2]] 1, wherein the micromirror array lens is
an adaptive optical component, wherein the
micromirror array lens corrects the defects of the
zoom system that cause the image to deviate from the
rules of paraxial imagery.

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Claim 22. (Currently amended) The zoom system of
claim [[2]] 1, wherein the micromirror array lens is
an adaptive optical component, wherein an object
which does not lie on the optical axis can be imaged
15 by the micromirror array lens without macroscopic
mechanical movement of zoom system.

Claim 23. (Currently amended) The zoom system of
claim [[2]] 1, wherein the micromirror array lens is
20 controlled to satisfy the same phase condition for
each wavelength of Red, Green, and Blue (RGB),
respectively, to get a color image.

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Claim 24. (Original) The zoom system of claim 23,
further comprising a plurality of bandpass filters.

Claim 25. (Original) The zoom system of claim 23,
5 further comprising a photoelectric sensor, wherein
the photoelectric sensor comprises Red, Green, and
Blue (RGB) sensors, wherein a color image is
obtained by treatment of electrical signals from the
Red, Green, and Blue (RGB) sensors.

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Claim 26. (Original) The zoom system of claim 25,
wherein the treatment of electrical signals from the
Red, Green and Blue (RGB) sensors is synchronized
and/or matched with the control of the micromirror
15 array lens to satisfy the same phase condition for
each wavelength of Red, Green and Blue (RGB),
respectively.

Claim 27. (Original) The zoom system of claim 1,
20 wherein the variable focal length lenses comprise a
first variable focal length lens and a second
variable focal length lens, wherein the focal length
of the first variable focal length lens and the
focal length of the second variable focal length
25 lens are changed to form the image in-focus at a

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given magnification.

Claim 28. (Original) The zoom system of claim 27,
wherein the first variable focal length lens is made
5 of a micromirror array lens, wherein the micromirror
array lens comprises a plurality of micromirrors.

Claim 29. (Original) The zoom system of claim 27,
wherein the second variable focal length lens is
10 made of a micromirror array lens, wherein the
micromirror array lens comprises a plurality of
micromirrors.

Claim 30. (Original) The zoom system of claim 27,
15 wherein the first variable focal length lens and the
second variable focal length lens are made of
micromirror array lenses, wherein each of the
micromirror array lenses comprises a plurality of
micromirrors.

20 Claim 31. (Currently amended) The zoom system of
claim 27, further comprising a beam splitter is
positioned between the first variable focal length
lens and the second variable focal length lens.

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Claim 32. (Original) The zoom system of claim 27,
wherein the first variable focal length lens and the
second variable focal length lens are positioned so
that the path of the light reflected by the first
5 variable focal length lens and the second variable
focal length lens is not blocked.

Claim 33. (Original) The zoom system of claim 27,
further comprising a focus lens group, an elector
10 lens group and a relay lens group, wherein the first
variable focal length lens forms a variator lens
group, and the second variable focal length lens
forms a compensator lens group.